

What is claimed is:

1. A method for improving suspension characteristics of a drilling fluid, said method comprising adding to said drilling fluid a substantially linear polymer comprising mostly polar hydrophobic monomers and a smaller amount of hydrophilic monomers, such that said drilling fluid shows progressive gel behavior.
2. The method of claim 1 wherein a laboratory prepared sample of said fluid comprising said polymer has a Stress Build Index in the range of about 1 to about 2 at 120°F.
3. The method of claim 1 wherein a laboratory prepared sample of said fluid comprising said polymer has a Gel Progression Index in the range of about 0 to about 10 at 120°F.
4. The method of claim 1 wherein a laboratory prepared sample of said fluid comprising said polymer has a Gel Progression Index in the range of about 0.3 to about 7 at 120°F.
5. The method of claim 1 wherein a laboratory prepared sample of said fluid comprising said polymer has a Gel Progression Index in the range of about 0.6 to about 2 at 120°F.
6. The method of claim 1 wherein a laboratory prepared sample of said fluid comprising said polymer has a yield stress less than about 15 at 120°F.
7. The method of claim 1 wherein said fluid comprising said polymer does not exhibit sag.
8. The method of claim 1 wherein said polymer is an emulsion copolymer of 2-ethylhexyl acrylate and acrylic acid.
9. The method of claim 1 wherein said improved suspension characteristics are obtained without the addition of organoclays to said drilling fluid.
10. The method of claim 1 wherein said polymer enhances fluid loss control without the addition of a fluid loss control additive.

11. The method of claim 1 wherein said polymer provides filtration control to the drilling fluid without the addition of a filtration control additive.
12. The method of claim 1 wherein said polymer comprises vinyl neodecanoate.
13. The method of claim 1 wherein the fluid comprises an oil base selected from the group consisting of esters, olefins, paraffins, and combinations thereof.
14. A method of drilling in a subterranean formation employing a drilling fluid that uses a polymer comprising mostly polar hydrophobic monomers and a smaller amount of hydrophilic monomers to provide said drilling fluid with suspension characteristics for suspending weighting agent, and wherein said drilling fluid can demonstrate progressive gel behavior.
15. The method of claim 14 wherein said polymer is an emulsion copolymer of 2-ethylhexyl acrylate and acrylic acid.
16. The method of claim 14 wherein said polymer comprises vinyl neodecanoate.
17. The method of claim 14 wherein said polymer also imparts fluid loss control to said drilling fluid.
18. The method of claim 14 wherein said drilling fluid is formulated without the addition of organophilic clays.
19. The method of claim 14 wherein a laboratory prepared sample of said drilling fluid has a Stress Build Index in the range of about 1 to about 2 at 120°F.
20. The method of claim 14 wherein a laboratory prepared sample of said drilling fluid has a Gel Progression Index in the range of about 0.6 to about 2 at 120°F.
21. The method of claim 14 wherein a laboratory prepared sample of said drilling fluid has a yield stress less than about 15 at 120°F.

22. The method of claim 14 wherein said polymer also imparts filtration control to said drilling fluid.
23. The method of claim 14 wherein said drilling fluid comprises an invert emulsion base.
24. The method of claim 23 wherein said invert emulsion base comprises an olefin or paraffin.
25. The method of claim 14 wherein said polymer further provides said drilling fluid with suspension characteristics for suspending drill cuttings.
26. The method of claim 14 comprising the steps of:
 - boring a wellbore in said subterranean formation;
 - completing said wellbore; and
 - producing fluid from said wellbore.
27. A method for providing a substantially clay free synthetic based drilling fluid that uses a substantially linear polymer comprising mostly polar hydrophobic monomers and a smaller amount of hydrophilic monomers to provide suspension characteristics for suspending drill cuttings when drilling in a subterranean formation.
28. A drilling fluid consisting essentially of:
 - a synthetic fluid invert emulsion base;
 - water or brine;
 - at least one emulsifier;
 - weighting agent; and
 - a substantially linear polymer comprising mostly polar hydrophobic monomers and a smaller amount of hydrophilic monomers.

29. The drilling fluid of claim 28 wherein said polymer contains about 40 to about 100% by weight C₆₋₁₀ alkyl acrylate.
30. The drilling fluid of claim 28 wherein said polymer contains vinyl neodecanoate.
31. The drilling fluid of claim 28 wherein said polymer contains at least about 0.1% acrylic acid.
32. A method for drilling in a subterranean hydrocarbon bearing formation, said method comprising employing the drilling fluid of claim 28.
33. The method of claim 32 comprising at least one step from the group consisting of:
 - boring a wellbore in a subterranean formation;
 - completing said wellbore; and
 - producing fluid from said wellbore.
34. The method of claim 33 wherein said step of completing said wellbore comprises cementing and casing said wellbore.
35. The method of claim 33 wherein said step of completing said wellbore comprises gravel packing said wellbore.